

CHAPTER 7

MAINTENANCE AIRCREW TASKS

This chapter describes those maneuvers and procedures that are essential for maintaining maintenance aircrew skills. Tasks will be performed for both training and evaluation. If discrepancies are found between this chapter and TM 55-1520-240-MTF, the technical manual takes precedence.

7-1. TASK CONTENTS

a. **Task Number and Title.** Each task is identified by a number and a title which correspond to the tasks in Chapter 5 (Figure 5-3).

b. **Conditions.** The conditions specify the situation in which the task is to be performed. They describe the important aspects of the performance environment. All conditions must be met before task iterations can be credited.

c. **Standards.** The standards describe the minimum degree of proficiency or standard of performance to which the task must be accomplished.

d. **Description.** The description explains how the task should be done to meet the standards. It includes individual and crew-coordinated actions that are to be performed as indicated by the MP (maintenance test pilot), P* (pilot on the controls), P (pilot not on the controls), and CE (crew chief or flight engineer). During maintenance test flights, the MP will be the PC.

e. **References.** The references listed for each task are sources of information about that particular task.

7-2. INDIVIDUAL AND CREW-COORDINATED ACTIONS

a. **Individual Actions.** These actions are the portions of a crew task that an individual must accomplish.

b. **Crew-Coordinated Actions.** These portions of a task require the interaction of the entire crew to ensure safe, efficient, and effective task execution.

TASK: Perform prior-to-maintenance-test-flight checks.

CONDITIONS: In a CH-47 helicopter and given TMs 55-1520-240-CL and 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TMs 55-1520-240-CL and 55-1520-240-MTF.
2. Correctly review appropriate information on DA Form 2404 (Equipment Inspection and Maintenance Worksheet), DA Form 2408-12 (Army Aviator's Flight Record), and DA Form 2408-13 (Aircraft Inspection and Maintenance Record) for completeness.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The MP will review all forms and records to ensure that the aircraft is ready for the maintenance test flight.
2. The MP will ensure that the preflight inspection is properly conducted per TM 55-1520-240-CL or TM 55-1520-240-MTF. He may direct that the other crew member(s) inspect all or designated sections of the aircraft. The MP will verify that all preflight checks have been completed and appropriate information has been entered on DA Forms 2404, 2408-12, and 2408-13.
3. The other crew member(s) will complete the preflight inspection as directed. They will inform the MP whether the aircraft or assigned sections meet required preflight inspection criteria.
4. The MP will determine the maneuvers or checks necessary for the maintenance test flight. He will use any additional publications and references required. The MP will brief the aircrew and, if available, the ground crew concerning operations around or on the aircraft and will ensure that the ground communications capability is adequate. He will stress any safety considerations or procedures applicable to the flight.
5. The MP will ensure that a walk-around inspection is completed prior to flight.

REFERENCES:

Aircraft logbook
AR 95-1
DA Pamphlet 738-751
TM 1-1500-328-23
TM 55-1520-240-10
TM 55-1520-240-CL
TM 55-1520-240-MTF
TM 55-1520-240-PM

TASK: Perform before-starting-engine checks.

CONDITIONS: In a CH-47 helicopter or a CH47FS before starting engines and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.
2. The aircrew and, if available, the ground crew will announce when their checks are completed.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform LCT manual operation check.

CONDITIONS: In a CH-47 helicopter or a CH47FS during starting engine checks and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION: The MP will place the cyclic trim switch to MANUAL. He will check for proper equipment installation by retracting the LCT actuators, one at a time, to the fully retracted position while observing a corresponding indicator movement. The MP will check both actuators by fully extending the indicators and observing their full displacement within 25 seconds. He will place the cyclic trim switch to AUTO and observe that the indicators return to GND.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform starting engine checks.

CONDITIONS: In a CH-47 helicopter or a CH47FS after the cockpit check and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF. He will announce when the checks are completed.
2. The P will announce when he initiates the engine start.
3. The P* will man the flight controls.
4. All crew members will clear the aircraft prior to the engine start.

REFERENCES:

AR 95-1
TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform AFCS evaluation.

CONDITIONS: In a CH-47 helicopter in flight and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P will announce the checks in sequence.
2. The P* will stabilize the aircraft at 110 KIAS. The P and CE will assist the P* in clearing the aircraft.
3. The P will check the barometric altitude hold by engaging the switch and ensuring that the altitude varies less than 100 feet during the AFCS checks.
4. The P will identify the AFCS selector switch and go from BOTH to NO. 1. The P* will check to ensure that the aircraft stays in trim. If it does not, he will bring the aircraft back to trim and the P will measure the amount of pedal required. The P will place the AFCS selector switch back to BOTH and then to NO. 2. The P* will repeat the trim check.
5. The P* will check the pitch axis by displacing the cyclic without depressing the control centering button. He will increase airspeed to 120 knots and then allow the cyclic to return. (The airspeed should return to 110 knots.) The P* will repeat the procedure by decreasing the airspeed to 100 knots. He will check the pitch beep trim by operating the four-way switch fore and aft; the aircraft should respond with nose-up and nose-down attitude changes.
6. The P* will check the roll axis and coordinated turn capability by moving the cyclic without depressing the control centering button to effect a 20-degree angle of bank. He will

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hold that bank angle for 60 degrees of turn and then will repeat the procedure in the opposite direction.

7. The P* will check the roll beep operation by moving the four-way switch to effect a 20-degree bank angle. He then will repeat the procedure in the opposite direction.

8. The P* will check the pitch and roll axis and the coordinated turn and roll beep in the Number 1 and Number 2 systems.

9. The P*/P will check the HSI select by using the cursor and depressing the appropriate buttons.

10. The P* will check the barometric altitude hold by slipping the thrust lever (without depressing the thrust trigger) to climb 75 feet and then releasing the thrust lever. He will repeat the procedure to decrease the altitude.

11. To conduct the DASH actuator low-rate operation check, the P will identify the AFCS selector switch. The P* will establish an airspeed of 110 knots. The P will turn the AFCS selector switch to OFF, and the P* will decrease airspeed to 90 knots. The P will turn the AFCS selector switch to BOTH and will check that the AFCS lights go out within 20 seconds. The P then will turn the AFCS selector switch to OFF. The P* will increase the airspeed to 110 knots. The P will turn the AFCS selector switch to BOTH and check that the AFCS lights go out within 20 seconds.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform engine run-up checks.

CONDITIONS: In a CH-47 helicopter or a CH47FS after the engine start and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.
2. The aircrew and, if available, the ground crew will announce when their checks are completed.

REFERENCES:

AR 95-1
TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform AFCS function check.

CONDITIONS: In a CH-47 helicopter at a stabilized hover and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will bring the aircraft to a stabilized 15- to 20-foot hover. The P will observe the LCT indicators to ensure that they retract to the 0-60 range.
2. The crew will ensure that the aircraft is clear.
3. While the P* hovers the aircraft into the wind, the P will identify the AFCS selector switch and place it to NO. 1. The P will momentarily move the switch to OFF and then back to NO. 1 to check for engagement error. The P*/P will repeat the procedure for the Number 2 system.
4. The P* will check the pitch axis by displacing the cyclic, without depressing the control centering switch, to create a 3-degree, nose-high attitude. He then will allow the cyclic to return to the neutral position. The attitude of the aircraft should return to within 2 degrees of the original attitude. The P* will repeat the procedure in the opposite direction (nose-low attitude).

NOTE: During the AFCS function check, the P*/P must ensure that both the pilot's and copilot's pitch and roll trim switches are operational.

5. The P* will check the pitch beep trim by moving the four-way switch on the cyclic to the forward position. He should observe a small nose-down attitude change. The P* then will move the four-way switch to the aft position and should observe a small nose-up change.

6. The P* will check the roll axis by moving the four-way switch to the left and then to the right. He will ensure that there is a corresponding change in the aircraft attitude.

7. The P* will check the yaw axis by applying a 1/2 inch input to the pedals without operating the control centering switch. He will hold the input for 30 degrees of turn. After the P* returns the pedals to neutral, the aircraft should capture a new heading. The P* will repeat the procedure in the opposite direction. The P then will place the swivel switch to UNLOCK, and the P* will repeat the check. This time, the aircraft should not capture a new heading but should dampen out the input. The P then will place the swivel switch to LOCK.

8. The P* will check the heading hold and bank angle hold by displacing the cyclic, without operating the control centering switch, to produce sideward flight. The aircraft should maintain the commanded attitude and original heading. The P* then will repeat the procedure in the opposite direction.

9. The P*/P will repeat the procedures in 4 through 8 above for the Number 1 and Number 2 systems.

10. The P* will establish a 25- to 30-foot hover to check the radar altimeter hold function. The P will engage the radar altimeter hold function by depressing the radar altimeter hold button. The P* will slip the thrust to displace the aircraft 5 feet and then release the thrust. The P*/P will repeat the procedure in the opposite direction. The P will release the radar altimeter hold by depressing the radar altimeter hold button.

REFERENCES:

TM 55-1520-240-23 series
 TM 55-1520-240-MTF
 TM 55-1520-240-T series

TASK: Perform droop eliminator check.

CONDITIONS: In a CH-47 helicopter on the ground and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. With the aircraft on the ground and the thrust control in ground detent, the P will set the RRPM to 100 percent and match the torques.
2. The P* will smoothly raise the thrust control to bring the aircraft to a stabilized 10- to 15-foot hover.
3. The P will record the stabilized torque split and any change in RRPM.
4. All crew members will clear the aircraft.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform torque differential check.

CONDITIONS: In a CH-47 helicopter on the ground and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly record the torque and N1 for each engine.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P will move the Number 2 ECL from FLIGHT to GROUND and beep the RRPM to 100 percent. The P* will raise the thrust control until the forward landing gear are "light on the wheels," and the torque indication on the Number 1 engine is at least 60 percent. (The forward gear may come off the ground during this check.) The P will maintain RRPM at 100 percent.
2. The P will record the N1 and torque indications for the Number 1 engine.
3. The P will reduce RRPM to minimum beep and then return the Number 2 ECL to FLIGHT while maintaining a constant thrust position.
4. The P will move the Number 1 ECL from FLIGHT to GROUND and return the RRPM to 100 percent. He then will record the N1 and torque indications for the Number 2 engine.
5. The P will reduce RRPM to minimum beep, and the P* will lower the thrust control to ground detent. The P will return the Number 1 ECL to FLIGHT and the RRPM to 100 percent.

NOTE: The P*/P will use the Number 1 and Number 2 normal engine beep trim switch to make all changes in RRPM.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform taxi checks.

CONDITIONS: In a CH-47 helicopter on a suitable surface with the engine run-up completed and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly perform ground taxi per Task 1015.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. All crew members will clear the aircraft.
2. The P*/P will check brake operation from both the pilot and copilot stations. The P will tell the P* to check the pilot brakes, one at a time, while he blocks the pedals. The P* will apply pressure on one pedal to ensure that it operates smoothly and that the brake does not fade. He then will check the other brake pedal in the same manner. The P will check the copilot brakes using the same procedure while the P* blocks the pilot pedals.
3. To check the power steering, the P* will remain focused outside the aircraft while the P performs the check. The P will place the swivel switch to STEER and move the turn knob left and then right to turn the aircraft 30 degrees. While the aircraft is turning, the P*/P will check their instruments for proper functioning. The P will allow the turn knob to return to center and check that the aircraft tracks properly. He also will set the swivel switch to LOCK and check that the aircraft tracks properly. The P will ensure that the steering control is inoperative with the swivel switch in LOCK.

REFERENCES:

Task 1015
TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform mechanical rig check.

CONDITIONS: In a CH-47 helicopter with the DASH actuator set to 36 inches and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will hover the aircraft crosswind. The P will ensure that the aircraft hovers within the prescribed parameters. The crew will ensure that the aircraft is clear.
2. The P* will return the aircraft to the ground and lower the thrust control to ground detent.
3. The P will identify the AFCS selector switch and place it to OFF.
4. The CE will reconnect the electrical connectors to the DASH actuators.
5. The P will identify the AFCS selector switch and place it to BOTH while observing that both AFCS caution lights go out.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform baseline and normal engine health indicator test.

CONDITIONS: In a CH-47 helicopter or a CH47FS with the before-takeoff checks completed or orally in a classroom environment.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly fill out the baseline HIT work sheet.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. For a normal HIT, after determining the FAT, the CE will tell the P the N1 setting for each engine. The P will place the Number 2 ECL to GROUND. The P* will control the cyclic and the pedals and remain focused outside the aircraft while the P controls the thrust and engine beep. The P will set the RRPM at 100 percent and raise the thrust control until the appropriate N1 is reached. After the PTIT stabilizes, the P will call out the PTIT. The CE will inform the MP of the difference between the actual PTIT and the PTIT recorded in the HIT log.

2. For a baseline HIT, the MP will determine the N1 to be used from the baseline HIT work sheet and will enter the appropriate information on the work sheet. The crew will accomplish the baseline HIT like a normal HIT except the P will do the test three times and average the results.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform control position check.

CONDITIONS: In a CH-47 helicopter at a stabilized hover with the AFCS function check completed and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. All crew members will clear the aircraft.
2. The P* will hover the aircraft crosswind. The P will determine the position of the LCT from the position indicator.
3. The P* will hover the aircraft into the wind. The P will measure the lateral cyclic and pedal positions.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform before-hover checks.

CONDITIONS: In a CH-47 helicopter or a CH47FS after the run-up checks are completed and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. All crew members will clear the aircraft.
2. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.
3. The P* will perform the ground instability check by setting the brakes and raising the thrust control to lift the front gear off the ground. He then will check aircraft response in all axes by making a slight input in the direction of each axis.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform speed sweep checks.

CONDITIONS: In a CH-47 helicopter in flight with the before-takeoff checks completed and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will fly the airspeeds announced by the P. The P will take the appropriate measurements.
2. The P*/P will check their instruments as required.
3. The P* will check the aircraft for coordinated turn capability at 150 KIAS. The crew will clear in the direction of turn, and the P* will place the aircraft in a coordinated turn at 150 KIAS. The MP will analyze the one-per-revolution and the three-per-revolution vibrations of the aircraft.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform LCT lift-off/retraction check.

CONDITIONS: In a CH-47 helicopter in flight and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Set the copilot's altimeter to 29.92.
3. Correctly record the PA and airspeed for LCT extension and retraction.
4. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
5. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will stabilize the aircraft at 50 KIAS and then will increase the airspeed to 70 knots. The P and CE will assist the P* in clearing the aircraft. The P will record the PA and airspeed when the LCTs begin to come out of the lower box.
2. The P* will stabilize the aircraft at 150 KIAS. The P will check that the LCT indicators are fully extended. The P* will decrease the airspeed until the LCTs begin to come out of the upper box. The P then will record the PA and airspeed.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform autorotation RPM check.

CONDITIONS: In a CH-47 helicopter at sufficient altitude for the power recovery prior to reaching 1,000 feet AGL and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Set the copilot's altimeter to 29.92.
3. Correctly check and record the fuel on board.
4. Correctly record PA, FAT, RRPM, and pedal split.
5. Maintain the aircraft within operating limits.
6. Complete the power recovery prior to reaching 1,000 feet AGL.
7. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
8. Correctly perform crew coordination actions.

DESCRIPTION:

1. The MP will brief the crew on the duties and procedures they should follow if an emergency occurs during the check.
2. The P will record the fuel on board, PA, and FAT at the altitude at which the RRPM will be checked.
3. The P* will establish an airspeed between 70 and 100 knots. He will ensure that an appropriate landing area is within reach and that the area below the aircraft is clear.
4. The P will record the peak RRPM at the selected altitude.
5. The P will announce that he is placing the emergency engine trim switches to MANUAL.
6. The P* will lower the thrust control to ground detent, and the P will simultaneously maintain the RRPM at 100 percent. The P will check the RRPM to ensure that it is not high and the

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engine instruments to ensure that the engines are still operating. The P will tell the P* to place the thrust in the full-down position and hold it there. The P* will ensure that the aircraft is in trim. He must not allow the RRPM to exceed 108 percent. The P will record the appropriate information.

7. To initiate the power recovery, the P* will adjust thrust to return the RRPM to the normal range. The P will announce that he is placing the emergency engine trim switches, one at a time, to AUTO. The P* will maintain the RRPM in the normal range and complete the power recovery prior to reaching 1,000 feet AGL.

8. The MP will ensure that the recorded information meets the prescribed parameters.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform self-tuning vibration absorber check.

CONDITIONS: In a CH-47 helicopter in flight and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will stabilize the aircraft at 120 KIAS. The P and CE will assist the P* in clearing the aircraft.
2. The P will increase the RRPM to 102 percent. The P*/P will check their STVAs.
3. The P* will increase the airspeed to 140 knots, and the P will decrease the RRPM to 98 percent. The P*/P will check their STVAs.
4. The P will increase the RRPM to 100 percent.

NOTE: The P*/P will use the Number 1 and Number 2 normal engine beep trim switch to make all changes in RRPM.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform RRPM droop check and thrust rod slippage check.

CONDITIONS: In a CH-47 helicopter in flight and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P* will ensure that the RRPM is at 100 percent and will establish an airspeed of 125 knots. The P and CE will assist the P* in clearing the aircraft.
2. The P* will depress and hold the thrust trigger and will increase the airspeed to 140 knots.
3. The P will check the RRPM droop.
4. The P* will release the thrust trigger and check for torque changes.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform turbine engine analysis check.

CONDITIONS: In a CH-47 helicopter at an appropriate pressure altitude with the topping stop installed and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Set the copilot's altimeter to 29.92.
3. Correctly record PA, FAT, torque, N1, and PTIT for the engine being topped.
4. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
5. Correctly perform crew coordination actions.

DESCRIPTION:

CAUTION

When the N2 actuators are in the maximum range, the P* must not lower the thrust control until the normal engine trim decreases the RRPM slightly. The droop eliminators are not effective at the maximum actuator range.

CAUTION

When a crew performs a TEAC with the Number 1 and Number 2 normal engine trim switch, both engine N2 actuators will be increased although the one engine is in GROUND. The crew must monitor the Number 1 and Number 2 normal engine trim switch when returning the ECL to FLIGHT to prevent exceeding the RRPM and engine limits.

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1. The MP will brief the crew on the duties and procedures they should follow if an emergency occurs during the TEAC.

2. The P will set his altimeter to 29.92.

3. The P* will establish an airspeed of 120 knots at an altitude at which the engine can be topped. The P and CE will assist the P* in clearing the aircraft.

4. The P will move the ECL of the engine not being topped from FLIGHT to GROUND while maintaining the RRPM at 100 percent. The P* will increase the airspeed to a maximum of 140 knots while maintaining altitude. The P will maintain the RRPM at 100 percent with the Number 1 and Number 2 normal engine beep trim switch until the engine is topped and the RRPM begins to decrease. The P will inform the P* to lower the thrust control to return the RRPM to 100 percent.

5. The P* will raise the thrust control to reduce the RRPM to 98 percent. The P will ensure that the N1 does not increase and will record the appropriate information.

6. To recover to normal flight, the P* will lower the thrust control to regain the RRPM at 100 percent. The P will decrease the Number 1 and Number 2 normal engine beep switch until he observes a positive decrease in the torque and RRPM. He will return the ECL of the engine not being topped to FLIGHT while maintaining the RRPM at 100 percent.

7. If the other engine needs to be topped, the P*/P will use the same procedure.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TC 1-216
TASK 2966

TASK: Perform communication and navigation equipment checks.

CONDITIONS: In a CH-47 helicopter or orally in a classroom environment and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P will read the appropriate communication and navigation checks.
2. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform after-landing checks.

CONDITIONS: In a CH-47 helicopter or a CH47FS and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. All crew members will clear the aircraft.
2. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series

TASK: Perform engine shutdown check.

CONDITIONS: In a CH-47 helicopter or a CH47FS and given TM 55-1520-240-MTF.

STANDARDS:

1. Without error, perform procedures and checks according to TM 55-1520-240-MTF.
2. Correctly check and perform all items in sequence.
3. Correctly determine all malfunctions or discrepancies and apply the corrective actions/troubleshooting procedures.
4. Correctly perform crew coordination actions.

DESCRIPTION:

1. The P will read all checks.
2. Each crew member will complete the required checks pertaining to his assigned crew station per TM 55-1520-240-MTF.

REFERENCES:

TM 55-1520-240-23 series
TM 55-1520-240-MTF
TM 55-1520-240-T series